"Express Mail" mailing label number:

EL153099469US

METHOD AND APPARATUS FOR TRACKING BANNER ADVERTISING

David S. Springer; Brian T. Zucker

~~BACKGROUND OF THE INVENTION~~

Cross-reference to Related Application

This application relates to co-pending United States Patent Application Serial No. XXXXXXX filed on October 9, 1998 entitled System and Method for Identification and Streamlined Access to Online Services, naming David S. Springer as inventor. The co-pending application is incorporated herein by reference in its entirety, and is assigned to the assignee of this invention.

Field of the Invention

The present invention relates generally to computer systems and more particularly to a method, computer system and apparatus for tracking banner ~~advertising.~~

Description of the Related Art

Personal computer systems have attained widespread use. A personal computer system, such as a DELL® personal computer system, can usually be defined as a desktop or portable microcomputer that includes a system unit having a system processor or central processing unit (CPU) with associated memory, a display panel, a keyboard, a hard disk storage device or other type of storage media such as a floppy disk drive or a compact disk read only memory (CD ROM) drive. These personal computer systems are information handling systems which are designed primarily to give independent computing power to a single user or group of users.

Many computer users purchase computer systems that provide means to access the internet or so-called "worldwide web". The worldwide web provides useful information to many computer users as well as banner advertising that is displayed on a computer users' computer screen. Generally, banner advertising is provided from a web server to a computer user. The particular advertising that is provided to the computer user is paid for by a party to a party associated with providing the advertising. The computer user that sees the banner advertising does not participate in any revenue associated with the banner advertising. What is needed is a method and computer system that allow a computer user to receive a benefit from viewing banner advertising.

Summary

~~SUMMARY OF THE INVENTION~~

A method and computer system is provided that allows a computer user to benefit from viewing banner advertising. One embodiment provides a method for allowing a computer user to benefit from viewing banner advertising by providing incentives for information transmitted to and from a computer server. The method also provides for tracking information provided to a computer user from a server, providing an identifier for a computer system associated with the computer user, the identifier identifying the computer system, providing at least one database associating the identifier with the computer user and information specific to the computer user, transmitting the identifier to the server, the server affiliated with the at least one database, transmitting the information to the computer system that is specific to the identifier, and logging the transmittal of the identifier in one of the at least one database.

Another embodiment includes a computer system with a processor, a memory device coupled to the processor, and an identifier for a computer system associated with a computer user, the identifier identifying the computer system, the identifier capable of being transmitted to a server, the server affiliated with at least one database that associates the identifier with the computer user and information specific to the computer user, the server tracking the transmittal of the identifier.

Another embodiment includes a system for tracking information transmitted by and to a computer user, the system including means for providing an identifier for a computer system associated with the computer user, the identifier identifying the computer system, at least one database associating the identifier with the computer user and information specific to the computer user, means for transmitting the identifier to a server, the server affiliated with the at least one database, means for transmitting the information to the computer system that is specific to the identifier, and means for logging the transmittal of the identifier in one of the at least one database.

~~BRIEF DESCRIPTION OF THE DRAWINGS~~

The present invention may be better understood, and its numerous objects, features, and advantages made apparent to those skilled in the art by referencing the accompanying drawings.

FIG. 1 is a block diagram of a personal computer system in accordance with an embodiment of the present invention.

FIG. 2, labeled "prior art", is a flow diagram illustrating a known method of providing banner advertising on the worldwide web.

FIG. 3 is a flow diagram illustrating a method of tracking and providing banner advertising and other information on the worldwide web according to an embodiment of the present invention.

FIG. 4 is a flow diagram illustrating a method of providing and tracking banner advertising and other information in accordance with an embodiment of the present invention.

FIG. 5 is flow chart illustrating a method of automatically tracking banner ~~advertising supplied to a computer user.~~

FIG. 6 is a flow diagram illustrating an alternate method of providing and tracking banner advertising and other information in accordance with an embodiment of the present invention.

The use of the same reference symbols in different drawings indicates similar or identical items.

DETAILED DESCRIPTION

Referring now to FIG. 1, a computer system **150** is shown consistent with an embodiment of the present invention that includes a processor **100**, and a memory **110** coupled to the processor **100** via local bus **120**.

Local bus **120** includes conventional data, address and control lines conforming to a standard external high speed microprocessor bus. Main system memory **110** may include dynamic random access memory (DRAM) modules coupled to local bus **120** by a memory controller **130**. Main memory **110** stores application programs and data for execution by processor **100**.

Basic Input/Output System (BIOS) software **115** is stored in nonvolatile memory BIOS ROM **105**. BIOS **115** is a microcode software interface between an operating system or application programs and the hardware of computer system **150**. The operating system and application programs access BIOS **115** rather than directly manipulating I/O ports and control words of the specific hardware. BIOS **115** is accessed through an interface of software interrupts and contains a plurality of entry points corresponding to the different interrupts. In operation, BIOS **115** is loaded from BIOS ROM **105** to memory **110** and is executed from memory **110**.

A bus interface controller or expansion bus controller **135** couples local bus **120** to an expansion bus **140**, thereby coupling both the memory **110** and processor **100** to expansion bus **140**. Expansion bus **140** is coupled to I/O controller **175** which is coupled to and controls the operation of output media and devices, including hard

drive **180**, floppy drive **185**, keyboard **190** and mouse **195**. Additionally, I/O controller **175** operates to control data transfer on the expansion bus **140**.

In accordance with an embodiment of the present invention, the hard drive **180** of computer system **100** holds applications specific to the computer user, and optionally, specific to the computer system. In one embodiment, the applications are installed on the hard drive **180**, or in firmware, for example, BIOS ROM **105**. In another example, a web page includes a software application program can install information on the hard drive **180** associated with the application.

The application program serves multiple purposes. The purposes include requesting an advertisement by transmitting a key identifier and possibly displaying the advertisement on the computer system. Alternatively, the application program disables the transmittal of advertisements, or provides information to a database concerning the types of advertisements a computer user desires to receive or, conversely, desires to avoid receiving.

Alternatively, if a computer system does not contain a unique key identifier associated with a database, the application program installs a unique key identifier corresponding to the computer user in the hard drive **180**. Optionally, the computer system **100** already has a unique key identifier installed, which is transmitted when a computer user requests access to a server. For example the unique key identifier could be a unique ID from a microprocessor, a system code, a system code stored in nonvolatile memory or a unique code stored in a peripheral. Additionally, the software application program transmits the information from the computer user to a database, discussed in further detail below.

Referring now to FIG. 2, labeled "prior art", a flow chart **200** illustrates a method showing how advertisements typically reach computer user **215** via the worldwide web. Advertisers **210** pay advertisement brokers AD BROKERS **230** to place banner advertisements on the worldwide web. Advertisement brokers **230** also receive advertisement requests AD REQ **260** from worldwide web servers WWW

SERVERS **290** when a worldwide web server needs an advertisement for a computer user **215**.

The advertisement brokers receive many ads from a plurality of advertisers. Therefore, an automatic bidding system **240** determines which advertisements of the lists of advertisements **230** should sent to a given computer user **215**. Additionally, the automatic bidding system determines when an advertisement should be transmitted. When an advertisement is bid upon and chosen, the advertisement is sent in step **280** to the computer user **215**.

Referring now to FIGS. 3, a simplified flow chart illustrates an embodiment of the present invention. FIG. 3 shows a method **300** for a computer user **310** to receive advertisements from a combination advertisement broker and server **320**, which is optionally a web server. As shown, the computer user **310** transmits a unique key identification requesting an advertisement **330**. In response, the combination advertisement broker and server **320** transmits an advertisement.

Instead of using a bidding procedure as described above relative to FIG. 2, the combination advertisement broker and server uses a procedure using database **350** to determine the advertisement that should be transmitted to the computer user **310**. The database **350** keeps track of which advertisement to transmit to particular computer users **310**. Additionally, database **350** keeps track of the number of times the database transmitted advertisements to a particular unique key identifier associated with a particular computer user **310**.

Referring now to FIG. 3 and FIG. 4 in combination, a flow chart describes the transmission and request of advertisements in accordance with an embodiment of the present invention. FIG. 4 illustrates an embodiment in which a computer user **310** logs on to a combination advertisement broker/server **320** by logging on **410**. Next at step **420**, the computer system transmits a unique identifier and requests a banner advertisement to be displayed on the computer user **310** computer system **100**. The combination advertisement broker/server **320** responds by transmitting an advertisement at step **430**.

Referring now to FIG. 5 in combination with FIGS. 3 and 4, a method **500** describes tracking banner advertising displayed to computer user **310**. After computer user **410** logs onto a server/advertisement broker **320**, step **510** provides that the database **350** check for a unique key identifier. If a unique key identifier is discovered, step **520** provides that a counter associated with the server/advertisement broker **320** account for the presence of the unique key identifier. For example, a counter counting the number of times the database located a unique key identifier optionally increases by one. The number of times the database locates a particular unique key identifier optionally determines which advertisements to transmit to the computer user. Additionally, the number of times a database locates a particular unique key identifier optionally provides a tracking mechanism for pricing of advertisements and for provides a mechanism for determining bonus incentives to computer users associated with unique key identifiers. For example, a particular unique key identifier that receives a predetermined number of advertisements on a monthly basis optionally receives discounts on computer components from the combination server/advertisement broker.

Another function of step **520** is to have a database search and locate advertisements that match the criteria provided by the computer user during the querying procedure. The unique key identifier optionally provides an address location in a memory within the database locating information providing during querying of the computer user. This information provides a plurality of parameters for choosing appropriate advertisements for transmittal to the computer user in step **540**. If no matching criteria is found in step **520**, step **550** provides that either the database transmit generic advertisements that are not specific to the computer user, or that the database transmit no advertisements at all. For example, the querying procedure optionally provides that the computer user choose whether or not to receive banner advertising. If the computer user chooses to avoid advertisements, the database reflects this choice and does not transmit advertisements.

If at step **510** no unique key identifier is found, step **530** provides that the database initialize the software application program discussed above. The software

application program then optionally queries the computer user to determine whether the computer user chooses to elect to receive banner advertisements and other information. In this regard the software application program optionally offers incentives encouraging the computer user to participate in receiving banner advertising and/or other information, including bonuses and discounts on a plurality of goods. Step **570** provides that the database decline from sending banner advertisements to the computer user should the computer user choose not to participate. Optionally, step **570** could also provide that if a computer user chooses not to participate, the database send other types of informational banners other than banner advertisements. For example, the database could be coupled to information centers that provide news flashes, stock exchange information, weather reports, or election results.

Step **560** could also provide that a computer user elect to receive informational banners in conjunction with banner advertisements. In this regard, a computer user could receive bonus rewards related to the informational banners chosen.

If at step **560** the computer user elects to receive banner advertisements, or informational banners in conjunction with banner advertisements, step **560** provides that the database store the unique key identifier, then return to step **510**, where the method provides for a search of the database for a unique key identifier.

FIG. 6 represents another method **600** for tracking banner advertisements and other information. Unlike the method described in FIG. 3, FIG. 6 shows a method wherein the server **650** and the advertisement broker **630** are not the same. Accordingly, instead of a combination advertisement broker and server transmitting advertisements, the server **650** receives a request for an advertisement **640** from a computer user **610** and the server **650** then transmits an advertisement **660**. Simultaneously, the identifier discussed above is transmitted in step **620** to the advertisement broker **630**. As in the above-described embodiments, the advertisement broker **630** logs the transmittal of the identifier in a database, thereby tracking the banner advertisements. The server **650** transmits an advertisement or other

information to the computer user **610** using either information stored in the hard drive **180** of the computer user **610**, or using information stored in a database associated with either the server **650** or the advertisement broker **630**. After receiving the information or advertisements, the computer system of the computer user **610** transmits a confirmation of advertisement or information receipt **620** to the advertisement broker **630**.

The method **600** of providing a separate advertisement broker **630** advantageously allows revenue sharing among other entities for transmittal of advertisements and information to a computer user **610**. For example, advertisements and information specific to a computer user **610** could be brokered through alternate sources allowing more diverse advertisements and information to be transmitted to the computer user **610**. Additionally, the method **600** advantageously allows bifurcation of advertisements, i.e., some advertisements could be bid upon in accordance with the prior art method of FIG. 2, and other advertisements could forgo the bidding procedure by having the server **650** transmit other advertisements and information to the computer user **610** outside of the bidding procedure.

Although particular embodiments of the present invention have been shown and described, it will be obvious to those skilled in the art that, based upon the teachings herein, changes and modifications may be made without departing from the embodiments of this invention and its broader aspects. Therefore, the appended claims are to encompass within their scope all such changes and modifications as are within the true spirit and scope of this invention. Furthermore, it is to be understood that the invention is solely defined by the appended claims. It will be understood by those within the art that if a specific number of an introduced claim element is intended, such an intent will be explicitly recited in the claim and, in the absence of such recitation, no such limitation is present. For a non-limiting example, as an aid to understanding, the following appended claims may contain usage of the introductory phrases "at least one" and "one or more" to introduce claim elements. However, the use of such phrases should not be construed to imply that the introduction of a claim element by the indefinite articles "a" or "an" limits any particular claim containing

such introduced claim element to inventions containing only one such element, even when same claim includes the introductory phrases "one or more" or "at least one" and indefinite articles such as "a" or "an"; the same holds true for the use of definite articles used to introduce claim elements.